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| 10/634,304 | 08/04/2003 | Paulo Pacheco | MWS-030 | 7963 |

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| EXAMINER |
|---|
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| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A  (Rev. 10/06)

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/634,304 | PACHECO ET AL. |
| | Examiner | Art Unit | |
| | Philip Wang | 2191 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>8/4/2003</u>.

2a)☐ This action is **FINAL**.          2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-47</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-47</u> is/are rejected.

7)☒ Claim(s) <u>40</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>04 August 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

## *Detail Action*

1.      This office action is in response to the application filed on 8/4/2003.

2.      Claims 1-47 are pending.


## *Specification*

3.      The disclosure is objected to because of the following informalities: On page 10, line 26

and 27 of the Specification, "The output equation processing unit 350" should be "The output

equation processing unit 330".

        Appropriate correction is required.


4.      The use of the trademark JAVA has been noted in this application, for example, page 5,

line 6. It should be capitalized wherever it appears and be accompanied by the generic

terminology.

        Although the use of trademarks is permissible in patent applications, the proprietary

nature of the marks should be respected and every effort made to prevent their use in any

manner which might adversely affect their validity as trademarks.


## *Claim Objections*

5.      Claim 40 is objected to because of the following informalities:  The instant claim does not

end with a period.  Appropriate correction is required.


## *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6.      Claim 35 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 35 recites the limitation of inheriting the state of the object from an abstract class. On page 11, 3$^{rd}$ paragraph, for example, "...The parent class is not suitable for instantiation and used to abstract out incomplete set of features...". In essence, and abstract cannot be used for instantiation, so it is impossible to have an object from an abstract class.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7.      Claims 10-13 and 17, 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 10 and 13 recites the limitation "the simulation environment" in "the context of the simulation environment". There is insufficient antecedent basis for this limitation in the claim.

For purpose of art rejection, the examiner assumes "the simulation environment" as "a

simulation environment". Claims 11 and 12 depend on claim 13 and suffer the same deficiency.


Regarding claims 17 and 18, the phrase "or other" renders the claim(s) indefinite

because the claim(s) include(s) elements not actually disclosed (those encompassed by "or

other"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).


### *Claim Rejections - 35 USC § 102*

(b) the invention was patented or described in a printed publication in this or a foreign country or
in public use or on sale in this country, more than one year prior to the date of application for
patent in the United States.

8.       Claims 1-3, 5-7, 21-23, 26-33, 36-41, and 44-47 are rejected under 35 U.S.C. 102(b) as

being anticipated by Denk et al. (US PGPub. No. 2001/0025292).


As per claim 1,

Denk et al. disclose

A method for implementing and using a filter object which generates an output in response to an

input of the filter object, wherein the output of the filter object depends on the input and a state

of the filter object, wherein the state of the filter object includes a minimum amount of

information necessary to determine the output of the filter object, the method comprising:

-       providing the filter object, the filter object being represented by equations

        performed to generate the output in response to the input of the filter object, the

        equations including the state of the filter object ([0031], for example,

        line 8-9, "…can be represented by the equation…"; See Fig.

        3, [0045]); and retaining the state of the filter object, wherein the filter object

is implemented and used in a first dynamically typed text-based programming

environment([0070], "The Matlab®..." where it shows a

dynamically types text-based programming environment is

used to implement such filter.).

As per claim 2,

the rejection of claim 1 is incorporated; further Denk et al. disclose

- the filter object retains a final value of the state obtained as a result of

    processing the input of the filter object (See Fig. 3, [0045]).

As per claim 3,

the rejection of claim 2 is incorporated; further Denk et al. disclose

- the final value of the state retained in the filter object is used as an initial value of

    the state for processing the input of the system (See Fig. 3, [0045]).

As per claim 5,

the rejection of claim 1 is incorporated; further Denk et al. disclose

- the step of presetting the state of the filter object retained in the filter

    object([0108], line 13, "...preset the threshold value...").

As per claim 6,

the rejection of claim 1 is incorporated; further Denk et al. disclose

- the output of the filter object is determined depending on a present input and a

    previous input of the filter object([0108], line 13, "...preset the

    threshold value..."; [0109], "...responsive to a predetermined

    characteristic of one more of signal X...").

As per claim 7,

the rejection of claim 6 is incorporated; further Denk et al. disclose

- the state of the filter object contains information about the previous input of the

    filter object(See Fig. 3, [0045]).

As per claim 21,

Denk et al. disclose

In a computer-implemented system, a method for generating an output of the system in

response to an input of the system, the method comprising the steps of:

- specifying a state of the system that includes a minimum amount of information

    that is necessary to determine the output of the system; retaining the state of the

    system in a memory; providing to the system the state of the system retained in

    the memory; and determining the output of the system depending on the input

    and a state of the system([0053], "...Initially, the rounding

    operand is assigned...in a manner consistent with the reduced

    precision desired for output signal..."), wherein the method is

    implemented in a dynamically typed text-based programming

    environment([0070], "The Matlab®..." where it shows a

    dynamically types text-based programming environment is

    used to implement such filter.).

As per claim 22,

the rejection of claim 21 is incorporated;

further Denk et al. disclose

- the step of specifying equations that the system performs to generate the output

    of the system from the input and the state of the system([0031], for

    example, line 8-9, "...can be represented by the equation...";

    Fig. 3).

As per claim 23,

the rejection of claim 21 is incorporated;

further Denk et al. disclose

- the step of controlling the state of the system retained in the memory ([0108],

  "...preset the threshold value...selectable...").


As per claim 26,

the rejection of claim 21 is incorporated;

- It is rejected for the same reason for the rejection claim 2.


As per claim 27,

the rejection of claim 21 is incorporated;

further Denk et al. disclose

- the state of the system provided to the system includes an initial state of the

  system for processing the input of the system ([0082], line 16-17, "...In

  this case, the rounding operand would be initially

  assigned...").


As per claim 28,

Denk et al. disclose

A computer readable medium holding instructions executable in a computer that provides a

dynamically typed text-based programming environment ([0070], "The Matlab®..."

where it shows a dynamically types text-based programming environment

is used to implement such filter.), wherein the computer generates an output of an

object in response to an input of the object, comprising:

- providing a class, the object being an instance of the class ([0071]-[0076]

    for Matlab® code);

- specifying a state of the object that includes a minimum amount of information

    that is necessary to determine the output of the system, the state being a

    property of the object; and determining the output of the object depending on the

    input and the state of the system ([0053], "…Initially, the rounding

    operand is assigned…in a manner consistent with the reduced

    precision desired for output signal…").


As per claim 29,

the rejection of claim 28 is incorporated;

further Denk et al. disclose

- the step of instantiating the object from the class ([0072]-[0076], for code

    example.).


As per claim 30,

the rejection of claim 28 is incorporated;

further Denk et al. disclose

- the object includes an adaptive filter object ([0028], "… adaptive

    filter…").

As per claim 31,

the rejection of claim 30 is incorporated;

further Denk et al. disclose

- the adaptive filter object includes an adapting algorithm that the adaptive filter

  performs ([0031], "...can be represented by the equation...").


As per claim 32,

the rejection of claim 28 is incorporated;

further Denk et al. disclose

- the object includes a discrete time filter object ([0034], line 9-12, "...

  signal sample...discrete time sequence of signal samples...").


As per claim 33,

the rejection of claim 28 is incorporated;

further Denk et al. disclose

- the step of controlling properties of the object including the state of the

  object ([0108], "...preset the threshold value...selectable...").


As per claim 36,

the rejection of claim 28 is incorporated;

further Denk et al. disclose

- the step of providing the class with methods which operate on the object of the

  class ([0072]-[0075]).

As per claim 37,

A system for implementing a filter object which generates an output in response to an input of

the filter object, wherein the output of the filter object depends on the input and a state of the

filter object, wherein the state of the filter object includes a minimum amount of information

necessary to determine the output of the filter object, the method comprising:

- a memory for retaining the state of the filter object (`[0109], line 8,`

  `"Memory 1138 can be used...."`); and

- a state equation processing unit for generating a new state of the filter object

  based on the state of the filter object retained in the memory and the input of the

  filter object (`[0031], for example, line 8-9, "...can be`

  `represented by the equation..."; See Fig. 3, [0045]`); wherein the

  filter object is implemented and used in a first dynamically typed text-based

  programming environment (`[0070], "The Matlab®..." where it shows a`

  `dynamically types text-based programming environment is`

  `used to implement such filter.`).


As per claim 38,

the rejection of claim 37 is incorporated;

further Denk et al. disclose

- the memory retains the new state of the filter object(`See Fig. 3, [0045]`).


As per claim 39,

the rejection of claim 38 is incorporated;

further Denk et al. disclose

- ·the new state retained in the memory is used as a state of the filter object in

  processing next input of the filter object(See Fig. 3, [0045]).


As per claim 40,

the rejection of claim 37 is incorporated;

further Denk et al. disclose

- an output equation processing unit for generating the output of the filter object

  based on the state of the filter object retained in the memory and the input of the

  filter object([0031], for example, line 8-9, "...can be represented

  by the equation...";).


As per claim 41,

the rejection of claim 37 is incorporated;

further Denk et al. disclose

- the state of the filter object contains information about the previous input of the

  filter object (See Fig. 3, [0045]).


As per claim 44,

the rejection of claim 1 is incorporated; further Denk et al. disclose

- the filter object operates on a sample-by-sample, block-by-block or frame-by-

  frame basis([0034], line 9-12, "... signal sample...discrete time

  sequence of signal samples...").


As per claims 45, 46, and 47,

- they are rejected for the same reason for the rejection of claim 44.


### Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9.      Claims 4, 24, 25, 34, 42, and 43 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Denk et al. (US PGPub. No. 2001/0025292) in view of Gay (US Patent No.

5,677,951).


As per claim 4,

the rejection of claim 1 is incorporated;

Denk et al. do not specifically disclose

- the step of resetting the state of the filter object retained in the filter object.

However, Gay disclose

- the step of resetting the state of the filter object retained in the filter object (c3,

line 5-26, specifically, line 11, "...a restart signal...").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the

invention was made to incorporate the teachings of Gay into the teachings Denk et al. to

include the step of resetting the state of the filter object retained in the filter object. The

modification would be obvious to one of ordinary skill in the art to want to allow the control of the

filer by a user as suggested by Gay (c3: 13-15).

As per claims 24, 34 and 42,

- they are rejected for the same reason as claim 4.


As per claim 25,

the rejection of claim 23 is incorporated;

Denk et al. do not specifically disclose

- the state of the system retained in the memory is set to a particular value entered

  by a user.

However, Gay disclose

- the state of the system retained in the memory is set to a particular value entered

  by a user(c3, line 5-26, specifically, line 11, "...a restart

  signal...").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the

invention was made to incorporate the teachings of Gay into the teachings Denk et al. to

include the state of the system retained in the memory is set to a particular value entered by a

user. The modification would be obvious to one of ordinary skill in the art to want to allow the

control of the filer by a user as suggested by Gay (c3: 13-15).


As per claim 43,

- It is rejected for the same reason as claim 25.

10.    Claims 8, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Denk et al. (US PGPub. No. 2001/0025292) in view of "AutoCode Solutions" (herein AutoCode,

http://web.archive.org/web/20021120051701/http://www.filter-solutions.com/, dated 2002).


As per claim 8,

the rejection of claim 1 is incorporated;

Denk et al. do not specifically disclose

  -    the filter object is utilized to generate code to implement a corresponding filter

       algorithm separate from the filter object implementation.

However, Autocode discloses

  -    the filter object is utilized to generate code to implement a corresponding filter

       algorithm separate from the filter object implementation (page 1, 1$^{st}$ para.,

       "...provides the capability to generate C code for your

       digital filter...").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the

invention was made to incorporate the teachings of Autocode into the teachings of Denk et al.

to include the filter object is utilized to generate code to implement a corresponding filter

algorithm separate from the filter object implementation. The modification would be obvious to

one of ordinary skill in the art to want to use the code in standard compatible compiler as

suggested by Autocode (p. 1, 1$^{st}$ para.).


As per claim 19,

the rejection of claim 8 is incorporated;

further Autocode discloses

- the code is a high-level programming language (page 1, 1st para.,

    "...provides the capability to generate C code for your

    digital filter...").

As per claim 20,

the rejection of claim 8 is incorporated; further Autocode disclose

- the code is a low-level machine or assembly language(page 1, 1st

    para.,"...The code is compatible with any standard C or C++

    compiler".).

11.    Claims 9-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Denk et al.

(US PGPub. No. 2001/0025292) in view of "AutoCode Solutions" (herein AutoCode,

http://web.archive.org/web/20021120051701/http://www.filter-solutions.com/, dated 2002), and

further in view of "Digital Filter Solutions", (herein DFS,

http://web.archive.org/web/20021120051701/http://www.filter-solutions.com/, dated 2002).

As per claim 9,

the rejection of claim 1 is incorporated;

Denk et al. do not specifically disclose

- the filter object is utilized to generate code to implement a corresponding test

    bench or filter analysis.

However, Autocode discloses

- the filter object is utilized to generate code (page 1, 1$^{st}$ para.,

   "...provides the capability to generate C code for your

   digital filter...").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the

invention was made to incorporate the teachings of Autocode into the teachings of Denk et al.

to include the filter object is utilized to generate code to implement a corresponding filter

algorithm separate from the filter object implementation. The modification would be obvious to

one of ordinary skill in the art to want to use the code in standard compatible compiler as

suggested by Autocode (p. 1, 1$^{st}$ para.).

Both Denk et al. and Autocode do not disclose

- implement a corresponding test bench or filter analysis.

However, DFS discloses

- implement a corresponding test bench or filter analysis (p. 9, "Precision and

   Quantization", "...provide digital filter test...").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the

invention was made to incorporate the teachings of DFS into the teachings of both Denk et al.

and Autocode to include "implement a corresponding test bench or filter analysis". The

modification would be obvious to one of ordinary skill in the art to want to determine if a digital

filter will execute properly on the target environment as suggested by DFS (p. 9, 2$^{nd}$

para., line 4, "..determine if your digital filer will execute

properly...").

As per claim 10,

the rejection of claim 8 is incorporated;

the rejection of claim 8 is incorporated;

Denk et al. do not disclose

> - the generated code can be executed, directly or via a suitable compilation
>
>   process,
>
> - However, Autocode dislcoses
>
> - the generated code can be executed, directly or via a suitable compilation
>
>   process, (p. 1, 1$^{st}$ para., "The code is compatible with any
>
>   standard C or C++ compiler."),

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the

invention was made to incorporate the teachings of Autocode into the teachings of Denk et al.

to include the generated code can be executed, directly or via a suitable compilation process,

on the host machine. The modification would be obvious to one of ordinary skill in the art to

want to use the code in standard compatible compiler as suggested by Autocode (p. 1, 1$^{st}$

para.).

Both Denk et al. and Autocode do not disclose

> - outside the context of the simulation environment on which the filter executes;

However, DFS discloses

> - outside the context of a simulation environment on which the filter executes (p.
>
>   9, "Precision and Quantization", "…the digital time
>
>   response from the Filter Solution Filter control
>
>   panel…provides digital filters and simulation features…on
>
>   your target processor").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the

invention was made to incorporate the teachings of DFS into the teachings of Both Denk et al.

and Autocode to include "outside the context of the simulation environment on which the filter executes". The modification would be obvious to one of ordinary skill in the art to want to determine if a digital filter will execute properly on the target environment as suggested by DFS (p. 9, 2$^{nd}$ para., line 4, "..determine if your digital filer will execute properly...").

As per claims 11 and 12,

the rejection of claim 10 is incorporated;

further Autocode disclose

- the generated code is a textual language/ a graphical description language (see page 2 code list in text. The examiner asserts that C can be used a graphical description language).

As per claim 13,

the rejection of claim 8 is incorporated;

Denk et al. do not disclose

- the generated code can be executed, directly or via a suitable compilation process,

However, Autocode dislcoses

- the generated code can be executed, directly or via a suitable compilation process, (p. 1, 1$^{st}$ para., "The code is compatible with any standard C or C++ compiler."),

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Autocode into the teachings of Denk et al.

to include the generated code can be executed, directly or via a suitable compilation process,

on the host machine. The modification would be obvious to one of ordinary skill in the art to

want to use the code in standard compatible compiler as suggested by Autocode (p. 1, 1st

para.).

 Both Denk et al. and Autocode do not dislcose

However, DFS discloses

- on the host machine, within the context of a simulation environment on which

    the filter executes (p. 9, "Precision and Quantization", "...the

    digital time response from the Filter Solution Filter

    control panel...provides digital filters and simulation

    features...").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the

invention was made to incorporate the teachings of DFS into the teachings of Both Denk et al.

and Autocode to include "on the host machine, within the context of the simulation environment

on which the filter executes". The modification would be obvious to one of ordinary skill in the

art to want to determine if a digital filter will execute properly on the target environment as

suggested by DFS (p. 9, 2nd para., line 4, "..determine if your digital

filer will execute properly...").


As per claim 14,

the rejection of claim 8 is incorporated;

Denk et al. do not disclose

- the generated code can be executed, directly or via a suitable compilation

    process,

However, Autocode dislcoses

- the generated code can be executed, directly or via a suitable compilation process, (p. 1, 1$^{st}$ para., "The code is compatible with any standard C or C++ compiler."),

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Autocode into the teachings of Denk et al. to include the generated code can be executed, directly or via a suitable compilation process, on the host machine. The modification would be obvious to one of ordinary skill in the art to want to use the code in standard compatible compiler as suggested by Autocode (p. 1, 1$^{st}$ para.).

Both Denk et al. and Autocode do not disclose

- an embedded system implementation.

However, DFS discloses

further DFS disclose

- an embedded system implementation (p. 9, 2$^{nd}$ para., line 4, "..determine if your digital filer will execute properly on your target system.").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of DFS into the teachings of Both Denk et al. and Autocode to include "on the host machine, within the context of the simulation environment on which the filter executes". The modification would be obvious to one of ordinary skill in the art to want to determine if a digital filter will execute properly on the target environment as suggested by DFS (p. 9, 2$^{nd}$ para., line 4, "..determine if your digital filer will execute properly...").

As per claim 15,

the rejection of claim 14 is incorporated;

- see reason for rejection of claim 11.


As per claim 16,

the rejection of claim 14 is incorporated;

- see reason for rejection of claim 12.


As per claim 17,

the rejection of claim 14 is incorporated;

further DFS discloses

- the generated code is suitable for use with a software implementation, including

    use on a general purpose processor, a digital signal processor, or other

    programmable compute architecture (p. 9, "Precision and

    Quantization", "... will execute properly on your target

    processor...").


As per claim 18,

the rejection of claim 14 is incorporated; further Denk et al. disclose

- the generated code is suitable for use with a hardware implementation, such as

    Field Programmable Gate Array (FPGA), Complex Programmable Logic Device

    (CPLD), or Application Specific Integrated Circuit (ASIC) device, the language

being VHSIC Hardware Description Language (VHDL), Verilog, or other

hardware description language([0061], "…Verilog HDL…").

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

It is noted that any citation [[s]] to specific, pages, columns, lines, or figures in the prior

art references and any interpretation of the references should not be considered to be limiting in

any way.  A reference is relevant for all it contains and may be relied upon for all that it would

have reasonably suggested to one having ordinary skill in the art. [[See, MPEP 2123]]

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Philip Wang whose telephone number is 571-272-5934.  The examiner

can normally be reached on Mon - Fri 8:00AM - 4:00PM.  Any inquiry of general nature or

relating to the status of this application should be directed to the TC2100 Group receptionist:

571-272-2100.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wei Zhen can be reached on 571-272-3708.  The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application

Information Retrieval (PAIR) system.  Status information for published applications may be

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applications is available through Private PAIR only. For more information about the PAIR

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PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).